



UNIVERSITAS MULAWARMAN

CONFERENCE MANUAL BOOK

The 2nd ICTAFF 2021

INTERNATIONAL CONFERENCE ON TROPICAL AGRIFOOD, FEED, AND FUEL

“The Sustainability of Tropical Agriculture in The Changing World”



SEPTEMBER 7th, 2021

PRESENTED BY:
FACULTY OF AGRICULTURE, MULAWARMAN UNIVERSITY
EAST KALIMANTAN, INDONESIA





TABLE OF CONTENTS

WELCOME LETTER RECTOR OF UNIVERSITAS MULAWARMAN	1
OPENING REMARKS DEAN FACULTY OF AGRICULTURE	2
OPENING REMARKS CHAIRMAN OF 2 ND ICTAFF 2021	4
CURICULUM VITAE OF KEYNOTE AND INVITED SPEAKER	6
GENERAL INFORMATION	10
CONFERENCE COMMITTEE	11
CONFERENCE MEETING ROOM CODE AND CONFERENCE GUIDANCE	13
RUNDOWN MEETING OF 2 ND ICTAFF 2021 (BREAKOUTROOM ZOOM)	15
ABSTRACT	24





Breakoutroom 7 : **Biosciences**
Moderator : **Ir. Sopialena, M.S, Ph.D & Kadis Mujiono, Ph.D**
IT Support Room 7 : **Riza Purnama, S.Kom**

No	TIME	CODE	ARTICLE TITTLE	PRESENTER
1	14.00-14.07	E1-BIO	Plants Diversity in Degraded Peat Swamp Forest in Tengku Dacing, Kayan- Sembakung Delta, Indonesia	Rita Diana , Paulus Matius, Syahrinudin, and Karyati
2	14.07-14-14	E2-BIO	The Fluctuation and Correlation of Diameter Increment and Climatic Elements in a Secondary Forest of Universiti Malaysia Sarawak, Malaysia	Karyati , Isa B. Ipor, Ismail Jusoh, and Mohd. Effendi Wasli
3	14.14-14.21	E3-BIO	Factors Affecting The Occurrence of Logging Waste in Natural Forests in East Kalimantan	Diah Rakhmah Sari , P N Kedang, D I Ghozali and Ariyanto
4	14.21-14.28	E4-BIO	Land Rehabilitation by Using Sengon and Jabon to Reduce Run Off and Erosion	Sri Sarminah , Karyati, Tomi Hartono, and Fadillah Afandi
	14.28-14.48		Discussion	Moderator
5	14.48-14.55	E5-BIO	Coal Mining In Good Environmental Governance Perspective	Semuel Risal , Abner Herry Bajari, Dorthea Renyaan, Slmaet Muchsin, Anak Agung Ayu Dewi Larantika
6	14.55-15.02	E6-BIO	Strategic Planning for Sustainable Tourism Management Pangempang Beach	Marlon Ivanhoe Aipassa , Sam Johan Emil, Erwiantono, Rochadi Kristiningrum, Yosep Ruslim
7	15.02-15.09	E7-BIO	The Potential of Residual Processing of Indonesian Marine and Coastal Areas as Biogas Energy	I Made Aditya Nugraha , I.G.MN. Desnanjaya, J.S.M Siregar, L.I. Boikh
8	15.09-15.16	E8-BIO	Application of the FTIR Method Combined with Chemometrics to Differentiate Raw Materials in Leather Gloves	Ragil Yuliatmo , Raden Lukas Martindro Satrio Ari Wibowo and Wisnu Pambudi
	15.16-15.36		Discussion	Moderator



Application of The FTIR Method Combined with Chemometrics to Differentiate Raw Materials in Leather Gloves

Ragil Yuliatmo^{1,*}, Raden Lukas Martindro Satrio Ari Wibowo¹, Wisnu Pambudi²

¹*Department of Leather Processing Technology, Politeknik ATK Yogyakarta, Bantul, 55185, Indonesia*

²*Laboratory of Instrumentation and Polymer, Politeknik ATK Yogyakarta, Bantul, 55185, Indonesia*

*Corresponding author. Email: ragilyuliatmor@atk.ac.id

ABSTRACT

Leather is the best material for making gloves, such as sport and fashion gloves. Gloves are usually made from goat, sheep or pig skin. In Indonesia and some Muslim countries, the products derived from pork are prohibited (haram). Most of costumers cannot differentiate the raw materials in leather products if there are no labels on these products. Various methods such as PCR, HPLC, GC-MS, and FTIR have been carried out to differentiate the row materials of leather products. The FTIR method is known as an inexpensive and easy to be used. The objective of this study was to evaluate the FTIR method combined with chemometrics to differentiate raw materials in leather gloves. Lipid extracts derived from the various skin and leather were scanned using an FTIR spectrophotometer at 4000–450 cm^{-1} . There is the differentiation of spectral in several wavenumbers (3000-2800 cm^{-1} and 1200-1000 cm^{-1}). The FTIR spectroscopy combined with chemometrics can differentiate pigskin, sheepskin, and goatskin through specific peaks in infrared spectra. This can be used as an initial analysis on determining the existence of skin adulteration in leather glove.

Keywords: *FTIR, Chemometrics, Leather Gloves, Raw Material Differentiation*

